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Application Serial Number: 09/689,159

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Date Processed by STIC: 5/31/2002

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Revised 01/29/2002



1647

## RAW SEQUENCE LISTING

DATE: 05/31/2002

PATENT APPLICATION: US/09/689,159

TIME: 08:30:24

Input Set : A:\Seqlist.txt

Output Set: N:\CRF3\05312002\I689159.raw

PP-6, 7-10

3 <110> APPLICANT: St. George-Hyslop, Peter  
 4 Rommens, Johanna  
 5 Fraser, Paul  
 7 <120> TITLE OF INVENTION: GENETIC SEQUENCES AND PROTEINS RELATED TO ALZHEIMER'S  
 DISEASE  
 9 <130> FILE REFERENCE: 1034/1F808US7  
 11 <140> CURRENT APPLICATION NUMBER: US 09/689,159  
 12 <141> CURRENT FILING DATE: 2000-10-12  
 14 <150> PRIOR APPLICATION NUMBER: US 08/509,359  
 15 <151> PRIOR FILING DATE: 1995-07-31  
 17 <160> NUMBER OF SEQ ID NOS: 183  
 19 <170> SOFTWARE: PatentIn version 3.0  
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 22 <211> LENGTH: 2791  
 23 <212> TYPE: DNA  
 24 <213> ORGANISM: Homo sapiens  
 26 <220> FEATURE:  
 27 <221> NAME/KEY: misc\_feature  
 28 <222> LOCATION: (1)..(2791)  
 29 <223> OTHER INFORMATION: where n may be either a or g or c or t/u, unknown or other  
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 37 tctgggagcc tgcaagtgc aacagccttt gcggtcctta gacagcttgg cctggaggag 180  
 39 aacacatgaa agaaagaacc tcaagaggct ttgttttctg tgaacagta tttctataca 240  
 41 gttgctccaa tgacagagtt acctgcaccg ttgtcctact tccagaatgc acagatgtct 300  
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 57 tgctataagg tcatccatgc ctggccttatt atatcatctc tattgttgct gttctttttt 780  
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Does Not Comply  
Corrected Diskette Needed

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/689,159

DATE: 05/31/2002

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Input Set : A:\Seqlist.txt

Output Set: N:\CRF3\05312002\I689159.raw

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141 Arg Glu Arg Gln Glu His Asn Asp Arg Arg Ser Leu Gly His Pro Glu
142 35 40 45
144 Pro Leu Ser Asn Gly Arg Pro Gln Gly Asn Ser Arg Gln Val Val Glu
145 50 55 60
147 Gln Asp Glu Glu Glu Asp Glu Glu Leu Thr Leu Lys Tyr Gly Ala Lys
148 65 70 75 80
150 His Val Ile Met Leu Phe Val Pro Val Thr Leu Cys Met Val Val Val
151 85 90 95
153 Val Ala Thr Ile Lys Ser Val Ser Phe Tyr Thr Arg Lys Asp Gly Gln
154 100 105 110
156 Leu Ile Tyr Thr Pro Phe Thr Glu Asp Thr Glu Thr Val Gly Gln Arg
157 115 120 125
159 Ala Leu His Ser Ile Leu Asn Ala Ala Ile Met Ile Ser Val Ile Val
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162 Val Met Thr Ile Leu Leu Val Val Leu Tyr Lys Tyr Arg Cys Tyr Lys
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## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/689,159

DATE: 05/31/2002

TIME: 08:30:24

Input Set : A:\Seqlist.txt

Output Set: N:\CRF3\05312002\I689159.raw

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169          180          185          190
171 Val Asp Tyr Ile Thr Val Ala Leu Leu Ile Trp Asn Leu Gly Val Val
172          195          200          205
174 Gly Met Ile Ser Ile His Trp Lys Gly Pro Leu Arg Leu Gln Gln Ala
175          210          215          220
177 Tyr Leu Ile Met Ile Ser Ala Leu Met Ala Leu Val Phe Ile Lys Tyr
178 225          230          235          240
180 Leu Pro Glu Trp Thr Ala Trp Leu Ile Leu Ala Val Ile Ser Val Tyr
181          245          250          255
183 Asp Leu Val Ala Val Leu Cys Pro Lys Gly Pro Leu Arg Met Leu Val
184          260          265          270
186 Glu Thr Ala Gln Glu Arg Asn Glu Thr Leu Phe Pro Ala Leu Ile Tyr
187          275          280          285
189 Ser Ser Thr Met Val Trp Leu Val Asn Met Ala Glu Gly Asp Pro Glu
190          290          295          300
192 Ala Gln Arg Arg Val Ser Lys Asn Ser Lys Tyr Asn Ala Glu Ser Thr
193 305          310          315          320
195 Glu Arg Glu Ser Gln Asp Thr Val Ala Glu Asn Asp Asp Gly Gly Phe
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198 Ser Glu Glu Trp Glu Ala Gln Arg Asp Ser His Leu Gly Pro His Arg
199          340          345          350
201 Ser Thr Pro Glu Ser Arg Ala Ala Val Gln Glu Leu Ser Ser Ser Ile
202          355          360          365
204 Leu Ala Gly Glu Asp Pro Glu Glu Arg Gly Val Lys Leu Gly Leu Gly
205          370          375          380
207 Asp Phe Ile Phe Tyr Ser Val Leu Val Gly Lys Ala Ser Ala Thr Ala
208 385          390          395          400
210 Ser Gly Asp Trp Asn Thr Thr Ile Ala Cys Phe Val Ala Ile Leu Ile
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213 Gly Leu Cys Leu Thr Leu Leu Leu Leu Ala Ile Phe Lys Lys Ala Leu
214          420          425          430
216 Pro Ala Leu Pro Ile Ser Ile Thr Phe Gly Leu Val Phe Tyr Phe Ala
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223 465

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226 &lt;211&gt; LENGTH: 1929

227 &lt;212&gt; TYPE: DNA

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230 &lt;220&gt; FEATURE:

231 &lt;221&gt; NAME/KEY: misc\_feature

232 &lt;222&gt; LOCATION: (1)..(1929)

233 &lt;223&gt; OTHER INFORMATION: where n may be either a or g or c or t/u, unknown or other

236 &lt;400&gt; SEQUENCE: 3

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/689,159

DATE: 05/31/2002

TIME: 08:30:24

Input Set : A:\Seqlist.txt

Output Set: N:\CRF3\05312002\I689159.raw

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 239 agagaaggaa ccaacacaag acagcagccc ttcgaggtct ttaggcagct tggaggagaa 120  
 241 cacatgagag aaagaatccc aagaggtttt gttttctttg agaaggtatt tctgtccagc 180  
 243 tgctccaatg acagagatac ctgcaccttt gtctacttcc cagaatgccc agatgtctga 240  
 245 ggacagccac tccagcagcg ccattccggag ccagaatgac agccaagaac ggcagcagca 300  
 247 gcatgacagg cagagacttg acaacctga gccaatatct aatgggaggc cccagagtaa 360  
 249 ctcaagacag gtggtggaac aagatgagga ggaagacgaa gagctgacat tgaatatggt 420  
 251 agccaatcat gtcattcatg tctttgtccc cgtgaccttc tgcattggtc tgcgtcgtggc 480  
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 257 catgatcagt gtcattgtca ttatgacct cctcctggtg gtctgtata aatacagggtg 660  
 259 ctacaagggtc atccacgctt ggcttattat ttcatctctg ttgttgctgt tctttttttc 720  
 261 gttcattttac ttaggggaag tatttaagac ctacaatgtc kccgtggact acgttacagt 780  
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 306 <212> TYPE: PRT  
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 312 <223> OTHER INFORMATION: where X is unknown or other  
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 323 Gln Glu Arg Gln Gln Gln His Asp Arg Gln Arg Leu Asp Asn Pro Glu  
 324 35 40 45  
 326 Pro Ile Ser Asn Gly Arg Pro Gln Ser Asn Ser Arg Gln Val Val Glu

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/689,159

DATE: 05/31/2002  
TIME: 08:30:24

Input Set : A:\Seqlist.txt  
Output Set: N:\CRF3\05312002\I689159.raw

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333 85 90 95  
335 Val Ala Thr Ile Lys Ser Val Ser Phe Tyr Thr Arg Lys Asp Gly Gln  
336 100 105 110  
338 Leu Ile Tyr Thr Pro Phe Thr Glu Asp Thr Glu Thr Val Gly Gln Arg  
339 115 120 125  
341 Ala Leu His Ser Ile Leu Asn Ala Ala Ile Met Ile Ser Val Ile Val  
342 130 135 140  
344 Ile Met Thr Ile Leu Leu Val Val Leu Tyr Lys Tyr Arg Cys Tyr Lys  
345 145 150 155 160  
347 Val Ile His Ala Trp Leu Ile Ile Ser Ser Leu Leu Leu Leu Phe Phe  
348 165 170 175  
W--> 350 Phe Ser Phe Ile Tyr Leu Gly Glu Val Phe Lys Thr Tyr Asn Val Xaa  
351 180 185 190  
353 Val Asp Tyr Val Thr Val Ala Leu Leu Ile Trp Asn Trp Gly Val Val  
354 195 200 205  
356 Gly Met Ile Ala Ile His Trp Lys Gly Pro Leu Arg Leu Gln Gln Ala  
357 210 215 220  
359 Tyr Leu Ile Met Ile Ser Ala Leu Met Ala Leu Val Phe Ile Lys Tyr  
360 225 230 235 240  
362 Leu Pro Glu Trp Thr Ala Trp Leu Ile Leu Ala Val Ile Ser Val Tyr  
363 245 250 255  
365 Asp Leu Val Ala Val Leu Cys Pro Lys Gly Pro Leu Arg Met Leu Val  
366 260 265 270  
368 Glu Thr Ala Gln Glu Arg Asn Glu Thr Leu Phe Pro Ala Leu Ile Tyr  
369 275 280 285  
371 Ser Ser Thr Met Val Trp Leu Val Asn Met Ala Glu Gly Asp Pro Glu  
372 290 295 300  
374 Ala Gln Arg Arg Val Pro Lys Asn Pro Lys Tyr Asn Thr Gln Arg Ala  
375 305 310 315 320  
377 Glu Arg Glu Thr Gln Asp Ser Gly Ser Gly Asn Asp Asp Gly Gly Phe  
378 325 330 335  
380 Ser Glu Glu Trp Glu Ala Gln Arg Asp Ser His Leu Gly Pro His Arg  
381 340 345 350  
383 Ser Thr Pro Glu Ser Arg Ala Ala Val Gln Glu Leu Ser Gly Ser Ile  
384 355 360 365  
386 Leu Thr Ser Glu Asp Pro Glu Glu Arg Gly Val Lys Leu Gly Leu Gly  
387 370 375 380  
389 Asp Phe Ile Phe Tyr Ser Val Leu Val Gly Lys Ala Ser Ala Thr Ala  
390 385 390 395 400  
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396 420 425 430  
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RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/689,159

DATE: 05/31/2002  
TIME: 08:30:25

Input Set : A:\Seqlist.txt  
Output Set : N:\CRF3\05312002\I689159.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

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Seq#:25; N Pos. 105,107,148,211,235,255,264,269,274,281,302,327,336,350,363  
Seq#:25; N Pos. 399,412  
Seq#:26; N Pos. 46,79,110,116,185,191,462,671,699  
Seq#:27; N Pos. 34,197,215,235,273,307,314,333,395,408,412,436,448  
Seq#:29; N Pos. 216,217,228,278,285,295,315  
Seq#:30; N Pos. 292,305,326  
Seq#:31; N Pos. 17,65,81,98,165,172,176,205,223,260,272,296,307,311,316,335  
Seq#:32; N Pos. 210,236,287,339,360,361,362,366,387,389,390,391,394,420,421  
Seq#:32; N Pos. 427,442,460,466



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Input Set : A:\Seqlist.txt  
Output Set : N:\CRF3\05312002\I689159..raw

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Seq#:34; N Pos. 60,107,113,117,123,143,149,196,213,217,233,330,344,360,366  
Seq#:34; N Pos. 369,374,382,387,408,410,425  
Seq#:35; N Pos. 22,83,205  
Seq#:36; N Pos. 135,138,145,150,162,180,196,200,243,250,311,319,347,359,366  
Seq#:36; N Pos. 374,393  
Seq#:37; N Pos. 24,52,81,83,105,121,129,132,147,158,183,209,219,226,257,275  
Seq#:37; N Pos. 301,316  
Seq#:38; N Pos. 177,349,374,492,552,558,561,585,643,650,666,675,706,718,732  
Seq#:38; N Pos. 740,746,756  
Seq#:39; N Pos. 19,48,49,52,57,62,77,81,107,111,113,116,123,144,154,175,181  
Seq#:39; N Pos. 182,186,189,190,197,198,209,211,213,216,219,222,234,244,263  
Seq#:39; N Pos. 265,268,274,278,288,294,295,299,303,305,324  
Seq#:40; N Pos. 17,40,65,119,160,177,233,268,297,367,376,381,408  
Seq#:41; N Pos. 34,52,62,71,75,103,110,145,186,215,218,232,243,251  
Seq#:42; N Pos. 20,28,32,61,69,91,95,117,120,131,140,146  
Seq#:43; N Pos. 293,314,322,324,345,352,355,366,369,379,397,466,487,490,498  
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Seq#:45; N Pos. 52,133,160,284,371,373,383,389,390,406,419  
Seq#:46; N Pos. 12,88,185,235,269,301,309,315,319,334,364,379,385  
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Seq#:47; N Pos. 325,335,354,357,369,375,422,446,471,479,483  
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Seq#:49; N Pos. 64,110,117,170,257,306,315,330,336,353,365  
Seq#:50; N Pos. 19,64,163,225,283,301,373,409,440,443,453,471,475,482,484  
Seq#:51; N Pos. 58,59  
Seq#:52; N Pos. 204  
Seq#:53; N Pos. 8,69,125,126,177,265,314,338,361  
Seq#:54; N Pos. 213,225,240,248,260,296,318,330,368,402,494,500,514,518  
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Seq#:56; N Pos. 40,166,253,377,379,383,402,418,437,451,484  
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Seq#:58; N Pos. 78,243,289,345,365,380,386,402,408,409,410,411  
Seq#:59; N Pos. 40,253,301,335,361,379,384,397,404,412,418,425,427,436,455  
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Seq#:61; N Pos. 356,358,363  
Seq#:62; N Pos. 11,116,260,317,325,361,431,439,445,457,476,491,495  
Seq#:63; N Pos. 13,262,319,433,456  
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Seq#:68; N Pos. 4,45,57,309,310,311,347,369  
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Seq#:70; N Pos. 390,400  
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Input Set : A:\Seqlist.txt

Output Set: N:\CRF3\05312002\I689159.raw

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Seq#:74; N Pos. 7,23,36,48,67,445  
Seq#:75; N Pos. 7,389  
Seq#:76; N Pos. 52,94,104,304,325,401,448  
Seq#:77; N Pos. 101,102,132,228,396,419,439,445,467  
Seq#:78; N Pos. 53,54,115  
Seq#:79; N Pos. 49,236,270,434,443,490  
Seq#:80; N Pos. 14,285,407,472  
Seq#:81; N Pos. 5,159,189,190,191,307,319,343,353  
Seq#:82; N Pos. 33,53,72,81,83,87,124,188,191,233,367,401,416,422,424,439  
Seq#:82; N Pos. 460,471,480,492  
Seq#:83; N Pos. 54,75,257,295,333,386,409,411,414,447  
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Seq#:85; N Pos. 292,312,351  
Seq#:86; N Pos. 199,446,483  
Seq#:87; N Pos. 392,399,439  
Seq#:88; N Pos. 469,487,500  
Seq#:89; N Pos. 49,114,302,319,343,367,470,484  
Seq#:90; N Pos. 12,20,24,124,155,262,293,299,374,392,419,426,431,458,467  
Seq#:90; N Pos. 475,485,486,488,490,491,494  
Seq#:91; N Pos. 56,139,418,438,439,475,477,501  
Seq#:92; N Pos. 109  
Seq#:93; N Pos. 30,479,484  
Seq#:94; N Pos. 53,145,204,260,266,283,305,318,337,339,342,360,364  
Seq#:95; N Pos. 25,26,77,78,142,164,166,179,232,264,277,295,310  
Seq#:96; N Pos. 6,25,33,68,123,131,165,183,201,202,227,267,273,282,304,309  
Seq#:96; N Pos. 310,315,319,326,342,347,362,367,370,371  
Seq#:97; N Pos. 47,149,182,249,250,277,280,340,345  
Seq#:98; N Pos. 25,159,162,165,196  
Seq#:99; N Pos. 282,369,374,421  
Seq#:100; N Pos. 23,39,44,65,68,84,141,142,179,208,246,276,283,308,380,393  
Seq#:100; N Pos. 406,416,424  
Seq#:101; N Pos. 252,409,434  
Seq#:102; N Pos. 84,146,240,335,414  
Seq#:103; N Pos. 144,171,172,217,219,270,315,352,353,358,359,362,369  
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Seq#:105; N Pos. 84,230,269,283,353,356,371,382,390,407,411  
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Seq#:107; N Pos. 145,157,168,180,183,184,189  
Seq#:108; N Pos. 216,419,471  
Seq#:109; N Pos. 94,96,120,122,359,388,432,459  
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Seq#:112; N Pos. 1,2,6,8,10,11,12,13,14,15,16,17,20,21,23,43,70,73,98  
Seq#:113; N Pos. 8,11,12,13,14,15,20,21,44  
Seq#:114; N Pos. 7,9,20,28,30,33,37,43,45,46,47,51,53,54,70,96,109,115,116  
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Seq#:114; N Pos. 196,198,211,214,217,219,220,221,225,227,230,231,234,239

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Seq#:118; N Pos. 2,5,6,7,8,10,11,12,13,14,15,22,27  
Seq#:119; N Pos. 2  
Seq#:120; N Pos. 11,18,55,67,72,132  
Seq#:121; N Pos. 170  
Seq#:122; N Pos. 130,143,152,153,158,164,230,262,272,316,343,349,374,417  
Seq#:123; N Pos. 11,35,155,336,402,435,441,443  
Seq#:124; N Pos. 119,123,164,178,186,212,261,304,318,322,332,348,351,364  
Seq#:125; N Pos. 52,133  
Seq#:135; N Pos. 5,9  
Seq#:136; Xaa Pos. 192,411,421,432,435,446  
Seq#:137; N Pos. 2137,2144,2152,2157,2160,2163,2180,2203,2213,2216,2225  
Seq#:150; N Pos. 12,532,576,592,626,634,643,777,805,808,811,877,909,919,963  
Seq#:150; N Pos. 990,996,1021,1064  
Seq#:151; N Pos. 94,159,172,254,268,276,385,676  
Seq#:152; N Pos. 263,297,302,312,320,346,355,572,843,890,914,931,991,1119  
Seq#:152; N Pos. 1184,1314,1331,1359,1362,1370,1418,1479,1509,1587,1592  
Seq#:152; N Pos. 1598,1601,1612,1652,1668,1704,1711  
Seq#:153; N Pos. 2,26,28,64,65,85,329,605,777,824,833,1031,1104,1151,1218  
Seq#:153; N Pos. 1238,1239,1300,1650,1798,1810,1834,1844  
Seq#:154; N Pos. 121,138,161,165,181,239,295,662,744,747,748,751,898,903  
Seq#:154; N Pos. 1502,1803,1850,1852,1921,1935  
Seq#:156; N Pos. 144,145,157,168,171,172,217,219,270,315,347,356,357,363  
Seq#:156; N Pos. 364,367,372,374,529,536,676,681,755,804,822,916,929,987  
Seq#:156; N Pos. 1004,1014,1067,1094,1116  
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Seq#:158; N Pos. 434,435  
Seq#:159; N Pos. 22,26,44,47,49,68,81,104,107,119,125,131,137,150,184,188  
Seq#:159; N Pos. 237,248,250,252,274,338,339,340,524,525,562,591,629,659  
Seq#:159; N Pos. 666,691,763,776,789,799,807  
Seq#:160; N Pos. 4,8,23,42,45,60,68,174,182,239,383,488,525,939  
Seq#:179; N Pos. 20  
Seq#:181; N Pos. 13,16  
Seq#:182; N Pos. 14

Use of <220> Feature(NEW RULES):

Sequence(s) are missing the <220> Feature and associated headings.  
Use of <220> to <223> is MANDATORY if <213> ORGANISM is "Artificial Sequence" or "Unknown". Please explain source of genetic material in <220> to <223> section (See "Federal Register," 6/01/98, Vol. 63, No. 104, pp.29631-32) (Sec.1.823 of new Rules)

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Seq#:164,165,166,167,172,173,174,175,176,177,178,180,183

*(These are errors in the Sequence Listing)*

09/29/59

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(sample of globul eva)

<210> 127

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<212> DNA

<213> Artificial Sequence

see p. 10

<400> 127

tggagactgg aacacaac

18